

On page 37, line 5, after "alanine", insert --, as shown  
 in Seq. ID No. 44--, line 9, after "isoleucine", insert --, as  
 shown in Seq. ID No. 45--, line 13, after "glycine", insert --, as  
 shown in Seq. ID No. 46--.

IN THE CLAIMS

*Sub P2* 1. (Twice amended) The isolated and purified

bacterial reverse transcriptase (RT) of claim 13, which RT [has]  
contains a sequence of amino acid residues as follows: Tyr-Xaa-  
 Asp-Asp, wherein Xaa is alanine or cysteine, as shown in Seq. ID  
 No. [4, residues 168-171] 58 *MW 58*  
*(G)* 43.

*C* 2. (Twice amended) The bacterial RT of claim 1

which [has] contains a second sequence of amino acid residues as  
 follows: Ser-Xaa-Xaa<sub>1</sub>-Xaa<sub>2</sub>, wherein [serine, x which] Xaa is a  
 hydrophobic residue selected from the group consisting of valine,  
 phenylalanine, leucine and isoleucine, Xaa<sub>1</sub> is a polar residue  
 selected from the group consisting of threonine, asparagine, lysine  
 and serine and Xaa<sub>2</sub> is a hydrophobic residue selected from the  
 group consisting of tryptophan, phenylalanine and alanine, as shown  
 in Seq. ID No. [4, residues 96-99] 51 *51*.

*G* 3. (Twice amended) The bacterial RT of claim 2

which [has] contains a third sequence of amino acid residues as  
 follows: Asn-Xaa-Xaa<sub>1</sub>, wherein Xaa is a hydrophobic residue

~~selected from the group consisting of alanine, leucine and phenylalanine and Xaa, is a hydrophobic residue selected from the group consisting of leucine, valine and isoleucine.~~

*H G Sub K3* 4. (Twice amended) The bacterial RT of claim 3

which [has] contains a fourth sequence of amino acid residues as follows: Xaa-Val-Thr-Gly, wherein Xaa is a polar residue selected from the group consisting of arginine, glutamic acid, lysine, valine and glutamine, as shown in Seq. ID No. [4, residues 225-228]

*H G Sub K4* 5. (Twice amended) The bacterial RT of claim 1

which [has] contains [the common] subdomains 1 through 7 shown as the boxed regions in Figure 14.

*H G Sub K4* 7. (Twice amended) The bacterial RT of claim 6

which [has] contains the 61 [conserved] amino acid residues as shown by black dots in Figure 14, <sup>SEQ ID NOS: 32-38</sup> wherein h is a hydrophobic residue and p is a small polar residue.

8. (Twice amended) An isolated and purified

bacterial RT which comprises an amino acid sequence selected from the sequences <sup>SEQ ID NOS: 32-38</sup> shown in Figure 14[, which sequences are shown in Seq. ID Nos. 30-36].